

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (original) A method of implementing a resonator in rate gyro mode, the resonator comprising a vibrating member adapted to be set into vibration at a resonant frequency under the effect of electrostatic forces generated by electrodes placed facing a portion of the vibrating member, the method comprising the steps of exciting the vibrating member by means of a combination of control signals comprising an amplitude control signal, a precession control signal, and an amplitude-modulated quadrature control signal, of measuring vibration of the vibrating member, and of demodulating the vibration at the resonant frequency of the vibrating member, wherein the precession control signal is applied at a frequency that is twice the resonant frequency.

2. (original) A method according to claim 1, wherein, during a stage of setting into vibration, the amplitude control signal is applied at the resonant frequency of the vibrating member, and during a stage of sustaining vibration, the amplitude control signal is applied at a frequency twice the resonant frequency.

3. (original) A method according to claim 2, wherein, during the sustaining stage, the amplitude control signal is applied to at least half of the electrodes distributed symmetrically about the vibrating member, or to the vibrating member itself.

4. (original) A method according to claim 1, wherein the amplitude control signal is applied in such a manner that the vibration of the vibrating member is oriented so that a vibration node is in register with each gap between two electrodes.

5. (original) A method according to claim 3, wherein the amplitude control signal is applied in such a manner that the vibration of the vibrating member is oriented so that a vibration node is in register with each gap between two electrodes, and wherein, at least during the stage of setting into vibration, the amplitude control signal is applied to at least two electrodes that are modally in quadrature relative to each other.

6. (original) A method according to claim 1, wherein the quadrature control signal is a DC signal applied to electrodes common to the amplitude control signal and to the precession control signal.

7-13. (canceled)